



## State of Utah

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## GUIDELINES

**TO:** New Source Review Section

**FROM:** Regg Olsen, Permitting Branch Manager *RD 3/6/17*

**DATE:** March 6, 2017

**SUBJECT:** Modeling Requirements for Oil and Gas Wellhead Sites

This guidance is provided to assist in evaluating if modeling for well gas pump jack engines and generators running electric pump jacks will be required. No 1-hour NO<sub>2</sub> modeling will be required for these sites provided they meet the criteria in the following table. This table indicates the length of stack piping that will be required to meet the 1-hour NO<sub>2</sub> NAAQS. Standard pipe lengths that are common to the industry are used in this requirement. Several modeling runs were used to determine these stack requirements. Please ensure that the conditions are put in the permit, if applicable.

Sources requiring an engine stack height based on the following table should include the following language in the enforceable condition section of the AO:

**"The engine shall vent exhaust gases vertically unrestricted with an attached stack pipe length of no less than (8 or 10) feet. [R307-401-8, R307-410-2]"**

Total Site HP Rating	Modeling Requirement
<b>Well Gas Powered Pumpjack Engines</b>	
Site HP Rating 150 HP or Less	No modeling or modifications to exhaust venting systems required
Site HP Rating of 151 HP to 305 HP	No modeling required if engines vent exhaust vertically unrestricted* with an attached engine stack height of 8'.
Site HP Rating Above 305 HP	No modeling required if engines vent exhaust vertically unrestricted* with an attached engine stack height of 10'.
<b>Generators Servicing Electric Pumpjack Engines</b>	
All Generators	No modeling required if generators vent vertically unrestricted* with an attached engine stack height of 8'.

\*Sources are required to meet the State's definition of 'Vertically Unrestricted' covered under R307-410-2. "Vertically Unrestricted Emissions Release" means the release of an air pollutant through a stack or opening whose flow is directed upward without any physical obstruction placed beyond the opening, and at a height which is at least 1.3 times the height of an adjacent building or structure, as measured from ground level.

**This Guideline shall be audited every five years by the major source manager to determine the current status and relevance of the information.**